



REMARKS

In the Official Action mailed on **25 January 2006**, the Examiner reviewed claims 1-30. Claims 1, 3, 6, 9-11, 13, 16, 19, and 20 were rejected under 35 U.S.C. §102(b) as being anticipated by Robertson et al (USPN 5,857,042, hereinafter "Robertson"). Claims 1, 5, 9, 11, 15, and 19 were rejected under 35 U.S.C. §102(e) as being anticipated by Sohmura et al (USPub 2003/0016920, hereinafter "Sohmura"). Claims 2, 7, 8, 12, 17, 18, 21-23, and 26-30 were rejected under 35 U.S.C. §103(a) as being unpatentable over Robertson. Claims 1, 4-6, 11, 14-16, 21, and 24-26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Ouchi (USPub 2003/0039455, hereinafter "Ouchi") in view of Robertson.

Rejections under 35 U.S.C. §102(b), 35 U.S.C. §102(e), and 35 U.S.C. §103(a)

Independent claims 1, 11, and 21 were rejected as being anticipated by Sohmura and Robertson, and as being unpatentable over Ouchi. Applicant respectfully points out that Sohmura and Ouchi teach a fiber optic coupling and waveguide sheet, respectively, to **couple signals between discrete components**, typically mounted on a printed circuit board (see Sohmura, FIG. 1 and paragraph [0012], and Ouchi, FIG. 1, and paragraph [0006]). Robertson does not teach using fiber optics or waveguides to couple signals.

In contrast, the present invention provides an interposer to couple signals **between semiconductor dies**, which are oriented so that the active faces of the semiconductor dies (which contain circuitry) face each other, wherein the interposer contains a plurality of waveguides with a **pitch of less than 50 microns** (see FIG. 8, and paragraphs [0034], [0035], and [0044] of the instant application). This is beneficial because it provides a technique and mechanism to couple a plurality of signals directly from one semiconductor die to another semiconductor die. There is nothing within Robertson, Sohmura, or Ouchi, either

separately or in concert, which suggests providing an interposer to couple signals between facing semiconductor dies, wherein the interposer contains a plurality of waveguides with a pitch of less than 50 microns.

Accordingly, Applicant has amended independent claims 1, 11, and 21 to clarify that the present invention provides an interposer to couple signals between facing semiconductor dies, wherein the interposer contains a plurality of waveguides with a pitch of less than 50 microns. These amendments find support in FIG. 8, and in paragraphs [0034], [0035], and [0044] of the instant application. Dependent claims 5, 15, and 25 have been canceled without prejudice.

Hence, Applicant respectfully submits that independent claims 1, 11, and 21 as presently amended are in condition for allowance. Applicant also submits that claims 2-4 and 6-10, which depend upon claim 1, claims 12-14 and 16-20, which depend upon claim 11, and claims 22-24 and 26-30, which depend upon claim 21, are for the same reasons in condition for allowance and for reasons of the unique combinations recited in such claims.

CONCLUSION

It is submitted that the present application is presently in form for allowance. Such action is respectfully requested.

Respectfully submitted,

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